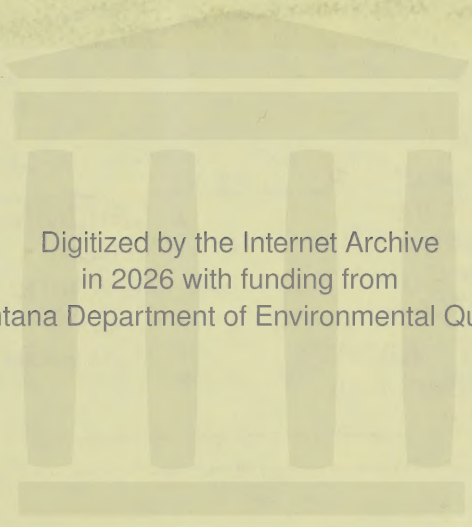


County Lewis & Clark
Facility & # City of Helena
Closure Landfarm
Finan Assur Liner
GW Corr Meas Methane
GW Monitoring O & M
GW Reports Run - On
Inspections
Other: _____



Digitized by the Internet Archive
in 2026 with funding from
Montana Department of Environmental Quality

<https://archive.org/details/SWS-CL-083>



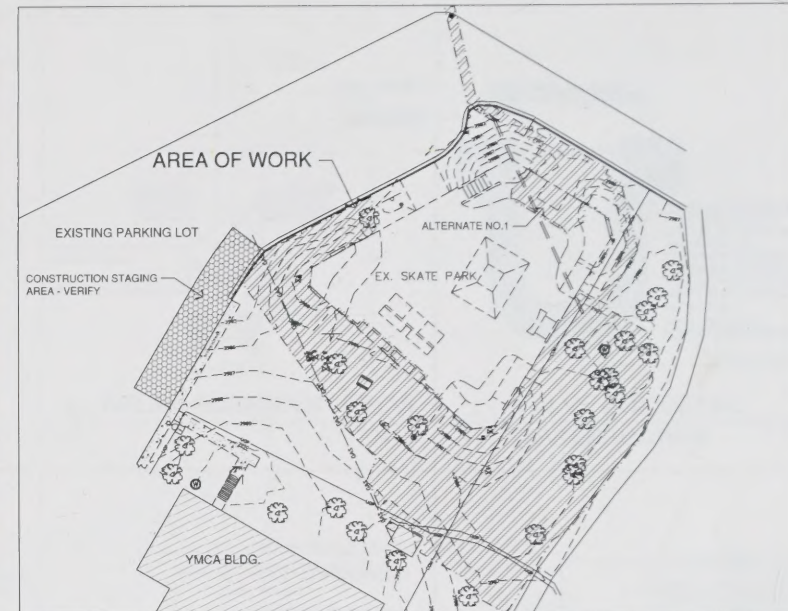
VICINITY MAP

N.T.S.



LOCATION MAP

N.T.S.



AREA OF WORK MAP

N.T.S.

PROJECT TEAM

OWNER'S REPRESENTATIVE

RICH LYND - CITY OF HELENA
SUPERINTENDENT
PARKS & OPEN LANDS
316 N. PARK AVENUE
HELENA, MT 59623
(406) 447-8485
(406) 447-8460 FAX

DESIGN CONTRACTOR

MARK SCOTT
DREAMLAND SKATEPARKS, LLC
960 SE HWY 101
LINCOLN CITY, OR 97239
(503) 577-5929

LANDSCAPE ARCHITECT

TROY MEARS
SR Design LLC
8196 SW HALL BLVD, SUITE 232
BEAVERTON, OR 97008
(503) 469-1213
(503) 469-8553 FAX

GENERAL NOTES

1. BLEND CUT AND FILL SLOPES TO CONFORM TO THE ADJACENT NATURAL GROUND.
2. DO NOT OBTAIN DIMENSIONS BY SCALING DRAWINGS. USE WRITTEN DIMENSIONS AND ANY DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE PRIOR TO THE COMMENCEMENT OF WORK.
3. ADVISE THE OWNER'S REPRESENTATIVE OF ANY CONFLICTS OR DISCREPANCIES 5 (FIVE) WORKING DAYS PRIOR TO STARTING WORK.
4. STAGING AREAS ARE TO BE WITHIN THE DESIGNATED CONSTRUCTION LIMITS. IF THE CONTRACTOR REQUIRES ADDITIONAL AREA, THEY SHALL SUBMIT A WRITTEN REQUEST TO THE OWNER'S REPRESENTATIVE.
5. VERIFY ALL SITE CONDITIONS BY SITE VISIT PRIOR TO BID OPENING.
6. EROSION CONTROL MEASURES ARE TO BE IN PLACE AND MAINTAINED AT ALL TIMES. THEY MUST CONFORM TO THE REQUIREMENTS SET FORTH IN THE EROSION CONTROL PLANS.
7. VERIFY LOCATION OF ALL UTILITIES PRIOR TO COMMENCEMENT OF WORK FOR LOCATIONS CONTACT HELENA PARKS & RECREATION DEPARTMENT, (541) 966-0370 AND THE UTILITIES NOTIFICATION CENTER 1(800) 424-5555 NOT LESS THAN 48 HOURS PRIOR TO BEGINNING WORK.

DRAWING INDEX

SHEET TITLE	SHEET NUMBER
COVER SHEET	L0
EXISTING CONDITION/EROSION CONTROL	L1
EROSION CONTROL DETAILS & NOTES	L2
LAYOUT PLAN	L3
GRADING & DRAINAGE PLAN	L4
DRAINAGE DETAILS	L5
REFERENCE PLAN	L6
CONSTRUCTION DETAIL SHEET	L7
CONSTRUCTION DETAIL SHEET	L8

RECEIVED

JUN 13 2009

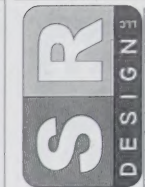
Dept. of Enviro. Quality
Waste & Underground
Tank Management Bureau

ORIGINAL

DESIGNED BY:



PMB 384
960 SE HWY 101
LINCOLN CITY, OR 97367-2622
TEL: 503.577.9277



8196 SW Hall Boulevard,
Suite 232
Beaverton, Oregon 97008
phone (503) 469-1213
fax (503) 469-8553
www.srdesign.com

LICENSED
249

TROY A. MEARS
STATE OF MONTANA
LANDSCAPE ARCHITECT

COVER SHEET
HELENA SKATE PARK EXPANSION

HELENA PARKS AND RECREATION
HELENA, MONTANA

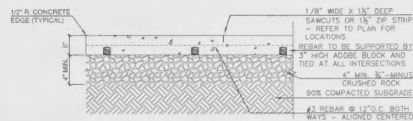
REV.	DESCRIPTION	DATE

PROJECT NO.
DSP001
CASE FILE NO.
LEGAL

DATE 4/02/09
DESIGNED T. MEARS
ENGINEER
CHECKED T. MEARS
SHEET TITLE
COVER SHEET
SHEET NUMBER

L0

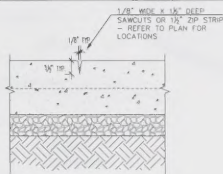
100% CONSTRUCTION SET



(A)
L8

6" CONCRETE PAVING DETAIL

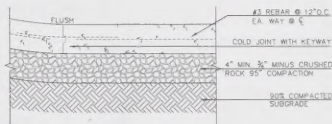
N.T.S.



(B)
L8

CONTROL JOINT, TYP. (CJ)

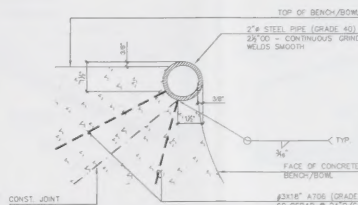
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(C)
L8

TOE CONNECTION DETAIL

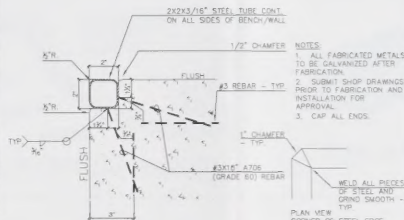
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(D)
L8

STEEL COPING DETAIL

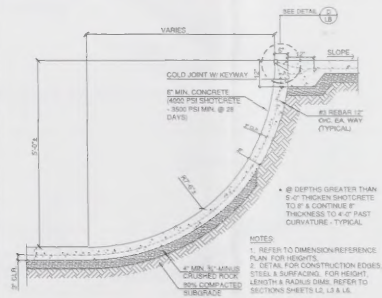
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(E)
L8

STEEL EDGING DETAIL

N.T.S.

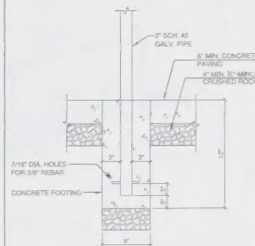


(F)
L8

TRANSITION RAMP DETAIL 'G'

(ALTERNATE NO. 1)

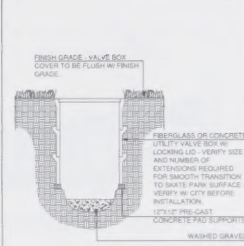
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(G)
L8

RAILING EMBEDMENT DETAIL

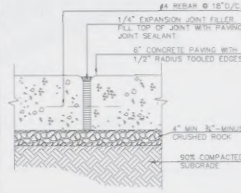
N.T.S.



(I)
L8

VALVE BOX DETAIL
(GAS EXTRACTION)

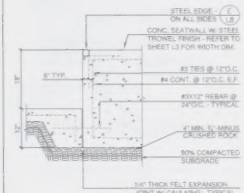
N.T.S.



(H)
L8

EXPANSION JOINT, (EJ)

N.T.S.



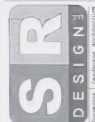
(J)
L8

TYPICAL LEDGE DETAIL

N.T.S.



FINB 354
190 SE HWY 101
LINCOLN CITY, OR 97347-2602
TEL: 503.577.9271



8105 SW 1st Avenue,
Suite 112
Portland, Oregon 97205-4813
Phone (503) 468-2123
Fax (503) 468-0553
www.srdesign.com

DESIGN
TROY A. MEARS
304TH ST
SEASIDE, OR
97138
LICENSED
LANDSCAPE ARCHITECT
249

DETAIL SHEET
HELENA SKATE PARK EXPANSION
HELENA PARKS AND RECREATION
HELENA, MONTANA

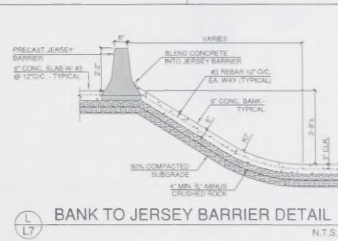
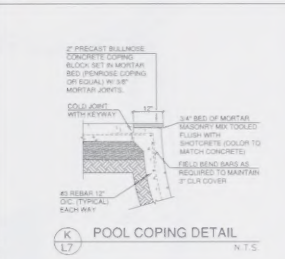
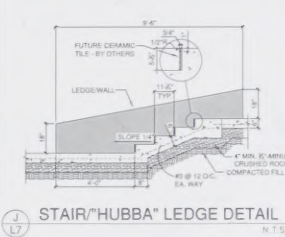
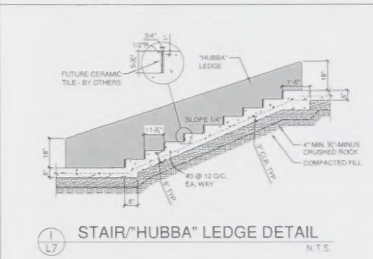
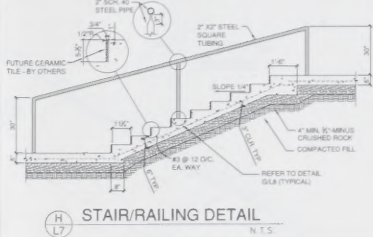
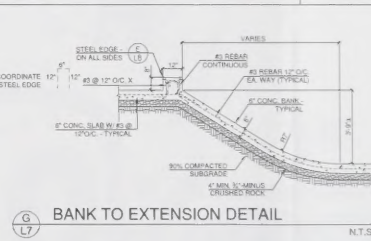
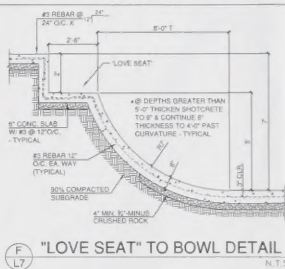
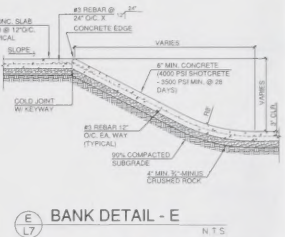
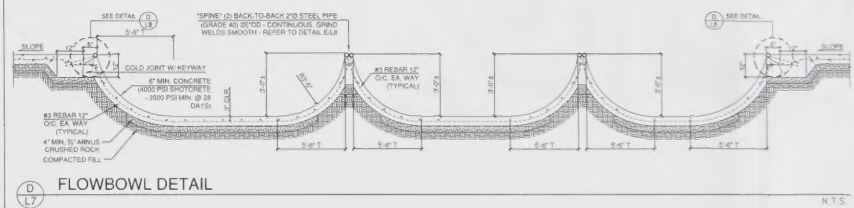
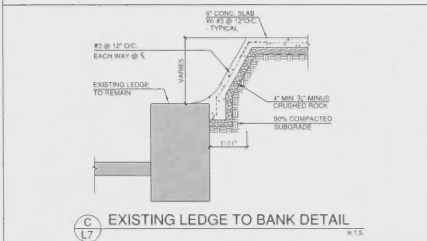
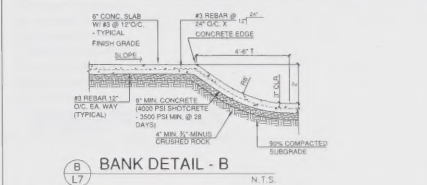
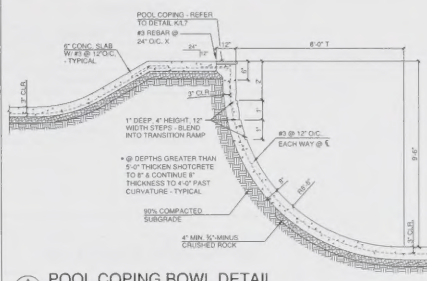
REV.	DESCRIPTION	DATE

PROJECT NO.
DSP001
SCALE: AS SHOWN
LEGAL

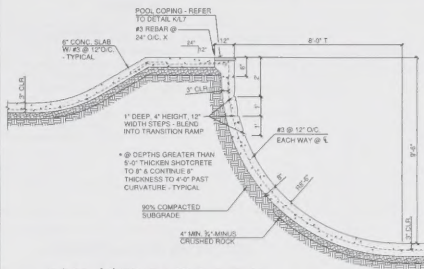
DATE: 4/05/09
DESIGNED: T. MEARS
ENGINEER: T. MEARS
CHECKED: T. MEARS
SHEET TITLE:
DETAIL SHEET
SHEET NUMBER

L8

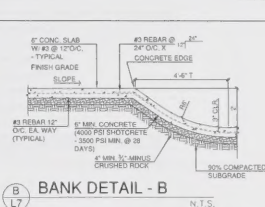
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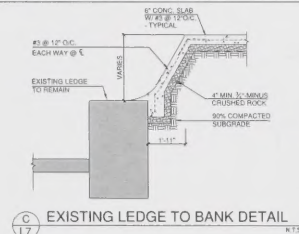
FMB 384
990 SE HWY 101
LINCOLN CITY, OR 97367-2602
TEL: 503.577.9277



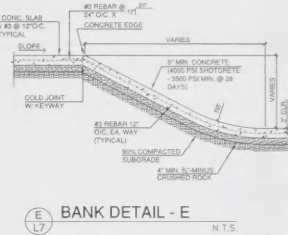
POOL COPING BOWL DETAIL
N.T.S.



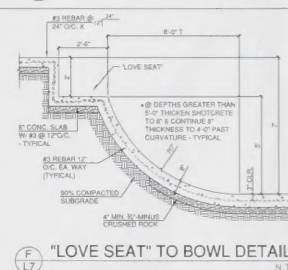
BANK DETAIL - B
N.T.S.



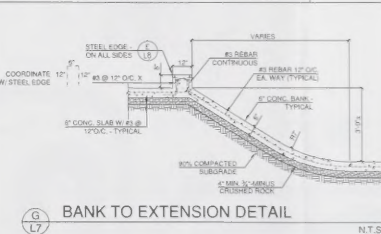
EXISTING LEDGE TO BANK DETAIL
N.T.S.



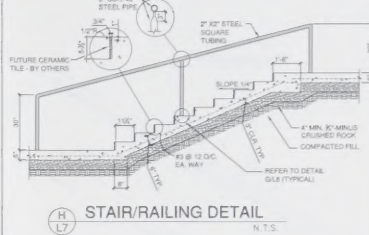
BANK DETAIL - E
N.T.S.



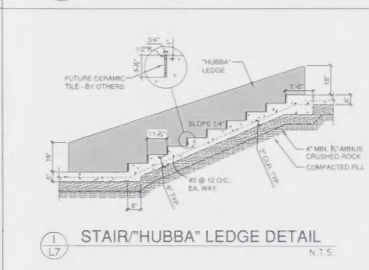
"LOVE SEAT" TO BOWL DETAIL
N.T.S.



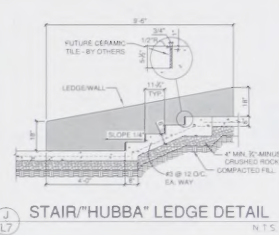
BANK TO EXTENSION DETAIL
N.T.S.



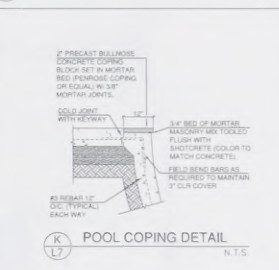
STAIR/RAILING DETAIL
N.T.S.



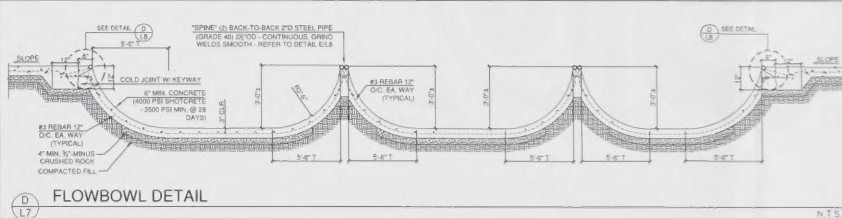
STAIR/'HUBBA' LEDGE DETAIL
N.T.S.



STAIR/'HUBBA' LEDGE DETAIL
N.T.S.



POOL COPING DETAIL
N.T.S.



FLOWBOWL DETAIL
N.T.S.

REV.	DESCRIPTION	DATE
1	ISSUED FOR PERMIT	4/22/09
2	DESIGNED FOR CONSTRUCTION	4/22/09
3	CHECKED FOR CONSTRUCTION	4/22/09
4	CONSTRUCTION SET	4/22/09



PMB 384
400 S. 10TH ST.
HELENA, MT 59601
TEL: 406.577.8077

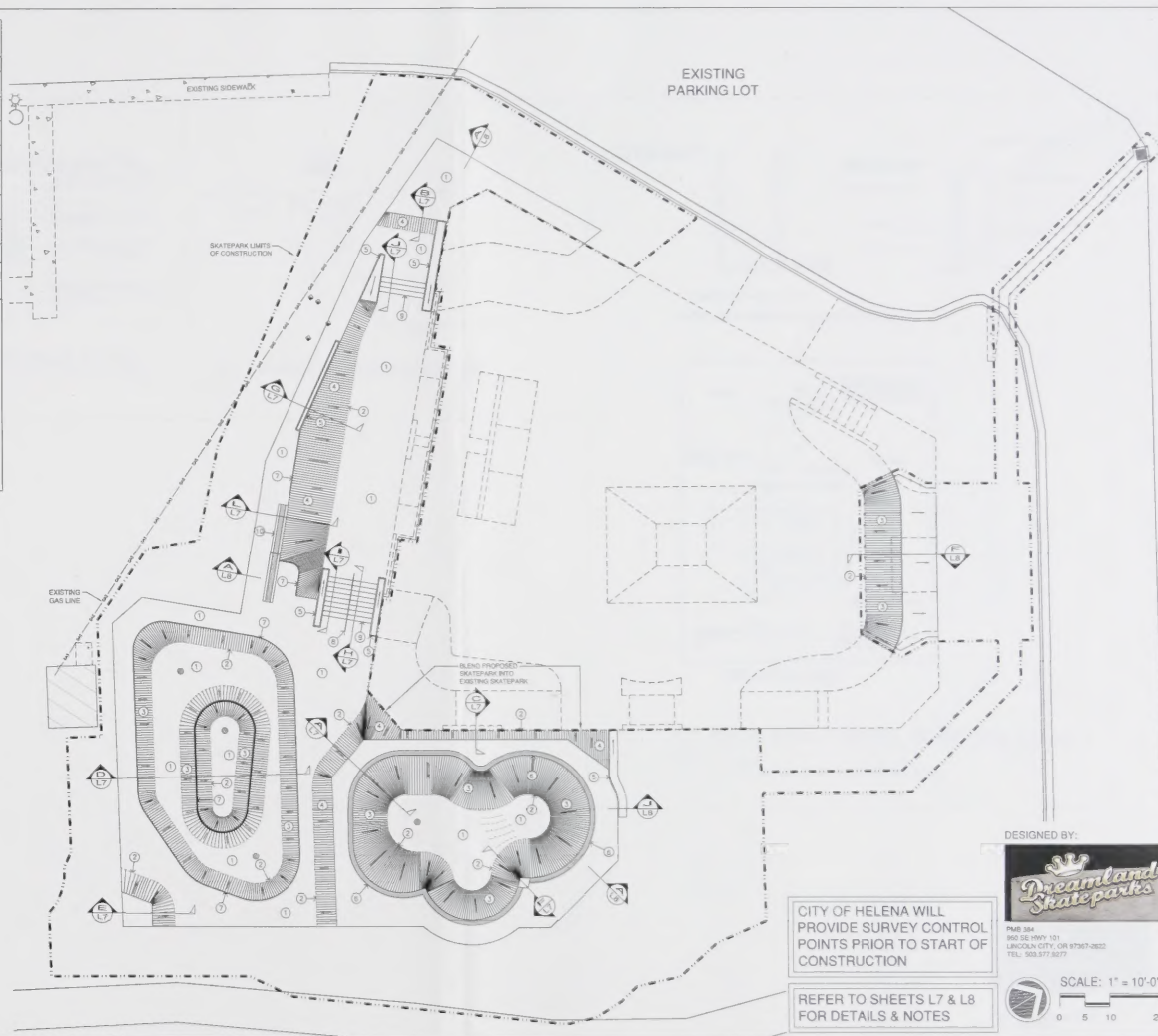
LEGEND

SYM	DESCRIPTION
	SKATEPARK LIMITS OF CONSTRUCTION
	GAS EXTRACTION VALVE BOX - REFER TO DETAIL IL3
	SLOPE DIRECTION
	SAWCUT LIMITS

REFERENCE PLAN NOTES

- ① CONCRETE PAVING (POURED-IN-PLACE) - SEE DETAIL AL3
- ② TIE CONNECTION - SEE DETAIL CL3
- ③ TRANSITION RAMP (SHOTCRETE) - SEE DETAIL FL3 (ALL SIMILAR)
- ④ BANK RAMP - SEE DETAIL EL7
- ⑤ STEEL EDGING - SEE DETAIL EL3
- ⑥ POOL COPING - SEE DETAIL KL7
- ⑦ STEEL COPING - SEE DETAIL SL3
- ⑧ HAND RAIL - SEE DETAIL HL7
- ⑨ STEPS - SEE DETAIL HL7 (SIMILAR)
- ⑩ JERSEY BARRIER - SEE DETAIL LL7

* ALL CONTROL JOINTS, EXPANSION JOINTS & CONSTRUCTION JOINTS WITHIN THE SKATE PARK ARE AT THE DISCRETION OF THE SITE CONTRACTOR.



CITY OF HELENA WILL
PROVIDE SURVEY CONTROL
POINTS PRIOR TO START OF
CONSTRUCTION

REFER TO SHEETS L7 & L8
FOR DETAILS & NOTES

DESIGNED BY:



PROJECT NO: DSP001
CASE FILE NO: 150377-002

DATE: 4/12/09
DESIGNED BY: T. MEARS
ENGINEER: T. MEARS
CHECKED BY: T. MEARS

SHEET TITLE: REFERENCE PLAN
SHEET NUMBER: 176

SCALE: 1" = 10'-0"

0 5 10 20

L6

100% CONSTRUCTION SET

REFERENCE PLAN
HELENA SKATE PARK EXPANSION
HELENA PARKS AND RECREATION
HELENA, MONTANA

S R DESIGN
3000 SW 1st Street
Helena, Montana 59601
Phone: (406) 444-1234
Fax: (406) 444-1235
www.srdesign.com
Planning / Engineering / Surveying / Construction Administration

LICENSED
TROY A. MEARS
STATISTICAL
LANDSCAPE ARCHITECT

REV.	DESCRIPTION	DATE

PROJECT NO: DSP001
CASE FILE NO: 150377-002

DATE: 4/12/09
DESIGNED BY: T. MEARS
ENGINEER: T. MEARS
CHECKED BY: T. MEARS

SHEET TITLE: REFERENCE PLAN
SHEET NUMBER: 176

SCALE: 1" = 10'-0"

0 5 10 20

L6

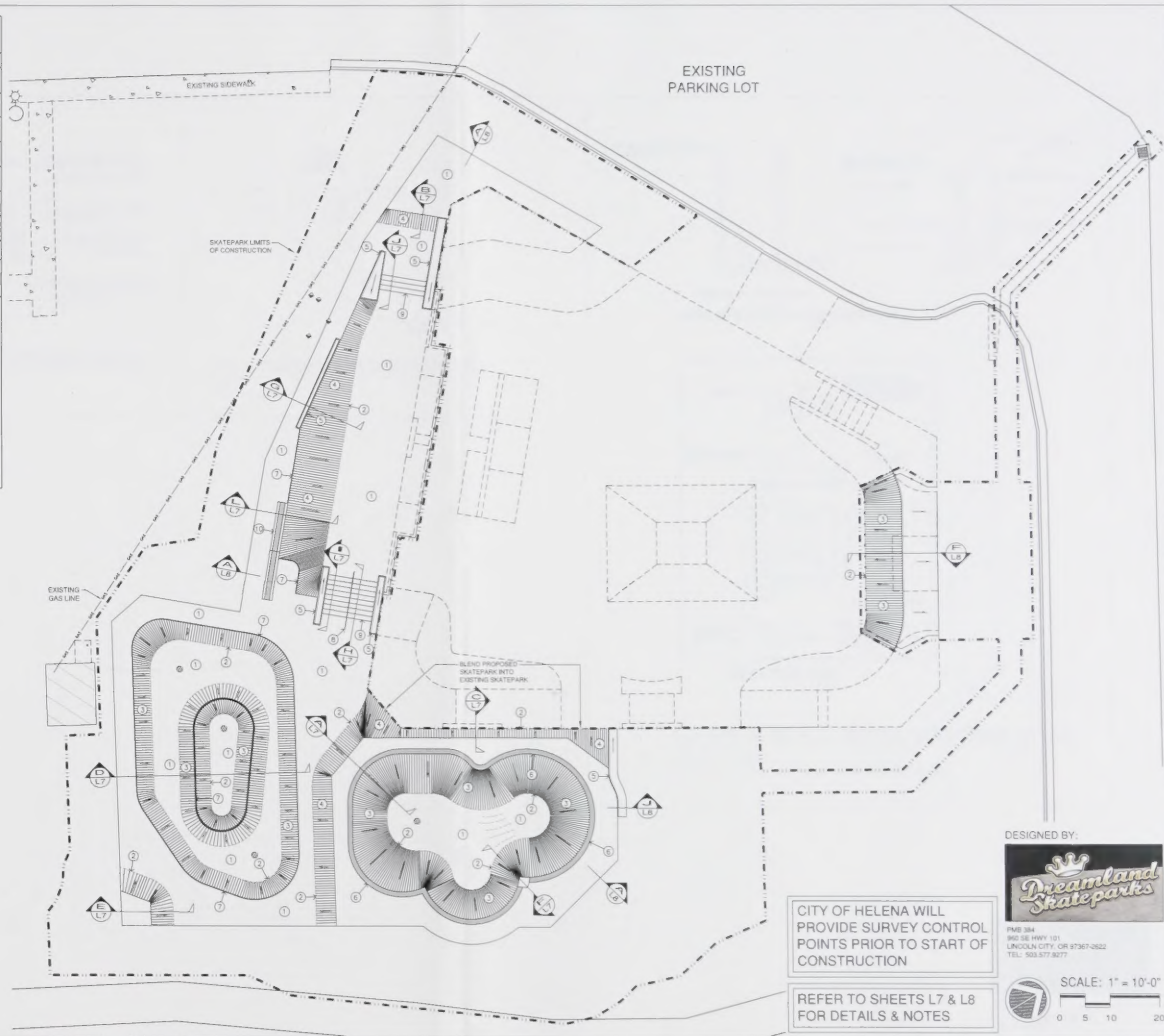
100% CONSTRUCTION SET

LEGEND

SYM	DESCRIPTION
	SKATEPARK LIMITS OF CONSTRUCTION
	GAS EXTRACTION VALVE BOX - REFER TO DETAIL K18
	SLOPE DIRECTION
	SMOOTH LIMITS

REFERENCE PLAN NOTES

- ① CONCRETE PAVING (POURED-IN-PLACE) - SEE DETAIL A18
 - ② TOE CONNECTION - SEE DETAIL C18
 - ③ TRANSITION RAMP (SHOTCRETE) - SEE DETAIL F18 (ALL SIMILAR)
 - ④ BANK RAMP - SEE DETAIL E17
 - ⑤ STEEL EDGING - SEE DETAIL G18
 - ⑥ POOL COPING - SEE DETAIL K17
 - ⑦ STEEL COPING - SEE DETAIL L18
 - ⑧ HAND RAIL - SEE DETAIL H17
 - ⑨ STEPS - SEE DETAIL J17 (SIMILAR)
 - ⑩ JERSEY BARRIER - SEE DETAIL L17
- ALL CONTROL JOINTS, EXPANSION JOINTS & CONSTRUCTION JOINTS WITHIN THE SKATE PARK ARE AT THE DISCRETION OF THE SITE CONTRACTOR.



CITY OF HELENA WILL
PROVIDE SURVEY CONTROL
POINTS PRIOR TO START OF
CONSTRUCTION

REFER TO SHEETS L7 & L8
FOR DETAILS & NOTES

DESIGNED BY:



PROJECT NO.
D8P001
CASE FILE NO.
DESIGNED BY
T. MEARS
CHECKED BY
T. MEARS
SHEET TITLE
REFERENCE PLAN
SHEET NUMBER
L6
100% CONSTRUCTION SET



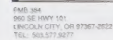
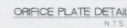
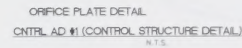
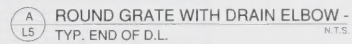
SCALE: 1" = 10'-0"
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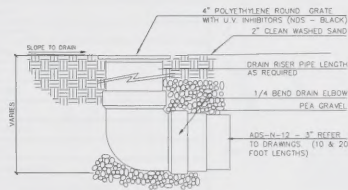
S R DESIGN
4108 SE 16th Avenue, Suite 212
Bloomington, Oregon 97008
Phone: (503) 444-4833
www.srdesign.com
Planning | Engineering | Surveying | Landscape Architecture

LICENSED
249
TROY A. MEARS
STATE OF MONTANA
LANDSCAPE ARCHITECT

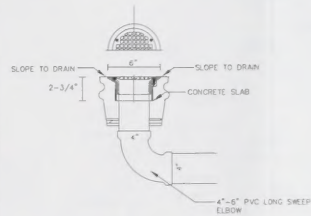
REFERENCE PLAN
HELENA SKATE PARK EXPANSION
HELENA PARKS AND RECREATION
HELENA, MONTANA

REV.	DESCRIPTION	DATE
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2	ISSUED FOR PERMIT	4/22/09
3	ISSUED FOR PERMIT	4/22/09
4	ISSUED FOR PERMIT	4/22/09
5	ISSUED FOR PERMIT	4/22/09
6	ISSUED FOR PERMIT	4/22/09
7	ISSUED FOR PERMIT	4/22/09
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15	ISSUED FOR PERMIT	4/22/09
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17	ISSUED FOR PERMIT	4/22/09
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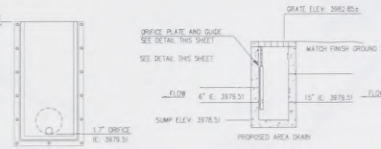


A
L5
ROUND GRATE WITH DRAIN ELBOW -
TYP. END OF D.L. N.T.S.

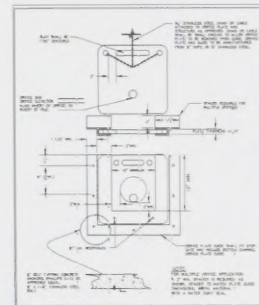


B
L5
ZURN FLOOR DRAIN (Z400-H) N.T.S.

TOP OF PLATE SET AT PEAK
GRADE ELEVATION E. 380.37



C
L5
ORIFICE PLATE DETAIL
CNTRL AD #1 (CONTROL STRUCTURE DETAIL) N.T.S.



D
L5
ORIFICE PLATE DETAIL
CNTRL AD #1 (CONTROL STRUCTURE DETAIL) N.T.S.

C
L5
CNTRL AD #1 (CONTROL STRUCTURE DETAIL) N.T.S.

NOTE:
1. ALL PRECAST STRUCTURES SHALL COMPLY WITH THE NOTES.



PMB 304
200 S. 10TH AVE. 101
LINCOLN CITY, OR 97367-6522
TEL: 503.677.9277

REV.	DESCRIPTION	DATE

PROJECT NO.
DSP001
CASE FILE NO.
LEGAL

DATE
4/22/09
DESIGNED
S. RUSSELL
ENGINEER
CHECKED
SHEET TITLE
DETAIL SHEET
SHEET NUMBER

L5

100% CONSTRUCTION SET

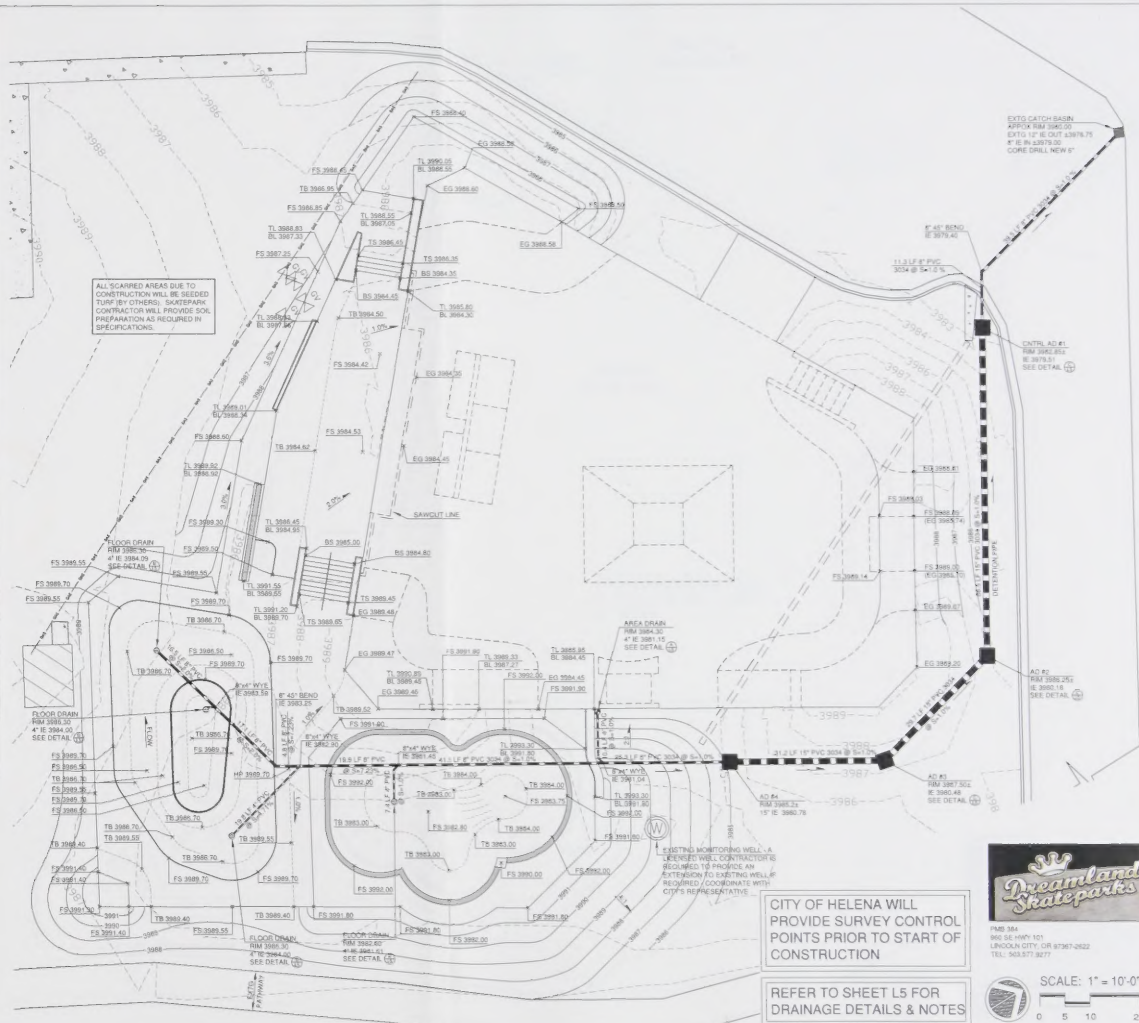
GRADING LEGEND	
SYM	DESCRIPTION
FS 154.00	PROPOSED ELEVATION
ES	EXISTING CONTOURS
	PROPOSED CONTOURS
FS	FINISH SURFACE ELEVATION
TS	TOE OF BANK
BS	BOTTOM OF STEP
TS	TOP OF STEP
BL	BOTTOM OF LEEDGE
TL	TOP OF LEEDGE
RM	RM ELEVATION
IE	INVERT ELEVATION
HP	HIGH POINT
BM	BENCH MARK - AS NOTED
	STORM DRAIN LINE - SIZE & TYPE AS NOTED
	1" FLOOR DRAIN - SEE DETAIL 3.1.5
	4" ROUND AOD AREA DRAIN - SEE DETAIL 1.0.5 & 2.1.5
	SLOPE DIRECTION
	SAW CUT LINE
	PROPOSED AREA DRAIN - REFER TO DETAIL 5.1.5

GRADING NOTES	
1.	THIS PLAN PROVIDES GENERAL GRADING INFORMATION. ALL SURVEYING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2.	EXPORTATION OF SOIL, WHICH MAY BE NECESSARY TO MEET THE GRADES SHOWN ON PLANS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE PART OF THIS CONTRACT.
3.	CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF THE LOCATION OF ALL EXISTING UTILITIES IN THE FIELD. LOCATIONS SHOWN ON PLANS ARE APPROXIMATE AND FOR GENERAL INFORMATION ONLY.
4.	ALL HIGH POINTS, LOW POINTS, OR GRADE BREAKS ON CONCRETE SHALL BE SMOOTH, HAVE A SMOOTH CURVE. CONCRETE SHALL NOT BE BUILT TO A POINT.
5.	THE CONTRACTOR SHALL MATCH THE NEW GRADES WITH THE LIMITS OF WORK TO THE EXISTING GRADES.
6.	CONTRACTOR SHALL PROVIDE SECURITY BARRIER DURING CONSTRUCTION & AFTER ACCEPTED. REFER TO CITY REQUIREMENTS FOR SPECIFICS.
7.	EROSION CONTROL FENCING REQUIRED TO BE IN PLACE PRIOR TO ANY SITE WORK.
8.	DEGRADE BEHIND WALLS & TRANSITION RAMP IS AT THE DISCRETION OF THE CONTRACTOR.
9.	CONTRACTOR IS RESPONSIBLE FOR PLACING TOPSOIL, ACCORDING TO SPECIFICATION SECTION 400.00, SOIL PREPARATION. OTHERS WILL BE REQUIRED FOR THE SEEDING OF ALL SCARIFIED AREAS DUE TO CONSTRUCTION. CONTRACTOR TO COORDINATE WITH CITY REPRESENTATIVE.
10.	APPROXIMATE REQUIRED TOPSOIL IS AS FOLLOWS (VOLUME): BASE: 60 REQUIRED TOPSOIL, 8" MINIMUM 150 CUBIC YARDS ALTERNATE NO. 1: REQUIRED TOPSOIL 8" MINIMUM 120 CUBIC YARDS

GRADING LEGEND	
SYM	DESCRIPTION
FS 154.00	PROPOSED ELEVATION
ES	EXISTING CONTOURS
	PROPOSED CONTOURS
FS	FINISH SURFACE ELEVATION
TS	TOE OF BANK
BS	BOTTOM OF STEP
TS	TOP OF STEP
BL	BOTTOM OF LEEDGE
TL	TOP OF LEEDGE
RM	RM ELEVATION
IE	INVERT ELEVATION
HP	HIGH POINT
BM	BENCH MARK - AS NOTED
	STORM DRAIN LINE - SIZE & TYPE AS NOTED
	1" FLOOR DRAIN - SEE DETAIL 3.1.5
	4" ROUND AOD AREA DRAIN - SEE DETAIL 1.0.5 & 2.1.5
	SLOPE DIRECTION
	SAW CUT LINE
	PROPOSED AREA DRAIN - REFER TO DETAIL 5.1.5

GRADING NOTES	
1.	THIS PLAN PROVIDES GENERAL GRADING INFORMATION. ALL SURVEYING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2.	EXPORTATION OF SOIL, WHICH MAY BE NECESSARY TO MEET THE GRADES SHOWN ON PLANS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE PART OF THIS CONTRACT.
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5.	THE CONTRACTOR SHALL MATCH THE NEW GRADES WITH THE LIMITS OF WORK TO THE EXISTING GRADES.
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9.	CONTRACTOR IS RESPONSIBLE FOR PLACING TOPSOIL, ACCORDING TO SPECIFICATION SECTION 400.00, SOIL PREPARATION. OTHERS WILL BE REQUIRED FOR THE SEEDING OF ALL SCARIFIED AREAS DUE TO CONSTRUCTION. CONTRACTOR TO COORDINATE WITH CITY REPRESENTATIVE.
10.	APPROXIMATE REQUIRED TOPSOIL IS AS FOLLOWS (VOLUME): BASE: 60 REQUIRED TOPSOIL, 8" MINIMUM 150 CUBIC YARDS ALTERNATE NO. 1: REQUIRED TOPSOIL 8" MINIMUM 120 CUBIC YARDS

- | GRADING LEGEND | |
|---|--|
| SYM | DESCRIPTION |
| FS 154.00 | PROPOSED ELEVATION |
| ES | EXISTING CONTOURS |
|  | PROPOSED CONTOURS |
| FS | FINISH SURFACE ELEVATION |
| TS | TOE OF BANK |
| BS | BOTTOM OF STEP |
| TS | TOP OF STEP |
| BL | BOTTOM OF LEEDGE |
| TL | TOP OF LEEDGE |
| RM | RM ELEVATION |
| IE | INVERT ELEVATION |
| HP | HIGH POINT |
| BM | BENCH MARK - AS NOTED |
|  | STORM DRAIN LINE - SIZE & TYPE AS NOTED |
|  | 1" FLOOR DRAIN - SEE DETAIL 3.1.5 |
|  | 4" ROUND AOD AREA DRAIN - SEE DETAIL 1.0.5 & 2.1.5 |
|  | SLOPE DIRECTION |
|  | SAW CUT LINE |
|  | PROPOSED AREA DRAIN - REFER TO DETAIL 5.1.5 |
-
- | GRADING NOTES | |
|---------------|--|
| 1. | THIS PLAN PROVIDES GENERAL GRADING INFORMATION. ALL SURVEYING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. |
| 2. | EXPORTATION OF SOIL, WHICH MAY BE NECESSARY TO MEET THE GRADES SHOWN ON PLANS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE PART OF THIS CONTRACT. |
| 3. | CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF THE LOCATION OF ALL EXISTING UTILITIES IN THE FIELD. LOCATIONS SHOWN ON PLANS ARE APPROXIMATE AND FOR GENERAL INFORMATION ONLY. |
| 4. | ALL HIGH POINTS, LOW POINTS, OR GRADE BREAKS ON CONCRETE SHALL BE SMOOTH, HAVE A SMOOTH CURVE. CONCRETE SHALL NOT BE BUILT TO A POINT. |
| 5. | THE CONTRACTOR SHALL MATCH THE NEW GRADES WITH THE LIMITS OF WORK TO THE EXISTING GRADES. |
| 6. | CONTRACTOR SHALL PROVIDE SECURITY BARRIER DURING CONSTRUCTION & AFTER ACCEPTED. REFER TO CITY REQUIREMENTS FOR SPECIFICS. |
| 7. | EROSION CONTROL FENCING REQUIRED TO BE IN PLACE PRIOR TO ANY SITE WORK. |
| 8. | DEGRADE BEHIND WALLS & TRANSITION RAMP IS AT THE DISCRETION OF THE CONTRACTOR. |
| 9. | CONTRACTOR IS RESPONSIBLE FOR PLACING TOPSOIL, ACCORDING TO SPECIFICATION SECTION 400.00, SOIL PREPARATION. OTHERS WILL BE REQUIRED FOR THE SEEDING OF ALL SCARIFIED AREAS DUE TO CONSTRUCTION. CONTRACTOR TO COORDINATE WITH CITY REPRESENTATIVE. |
| 10. | APPROXIMATE REQUIRED TOPSOIL IS AS FOLLOWS (VOLUME):
BASE: 60 REQUIRED TOPSOIL, 8" MINIMUM 150 CUBIC YARDS
ALTERNATE NO. 1: REQUIRED TOPSOIL 8" MINIMUM 120 CUBIC YARDS |



REFER TO SHEET L5 FOR
DRAINAGE DETAILS & NOTES



PMB 384
960 SE HWY 101
LINCOLN CITY, OR 97367-2522
TEL: 503.577.9277

SCALE: 1" = 10'-0"

GRADING & DRAINAGE PLAN
HELENA SKATE PARK EXPANSION

HELENA PARKS AND RECREATION
HELENA, MONTANA

1396 SW 14th Boulevard,
Suite 232
Astoria, Oregon 97103
phone (503) 469-1213
fax (503) 469-8553
www.3dill.com



PROJECT NO. DSP001

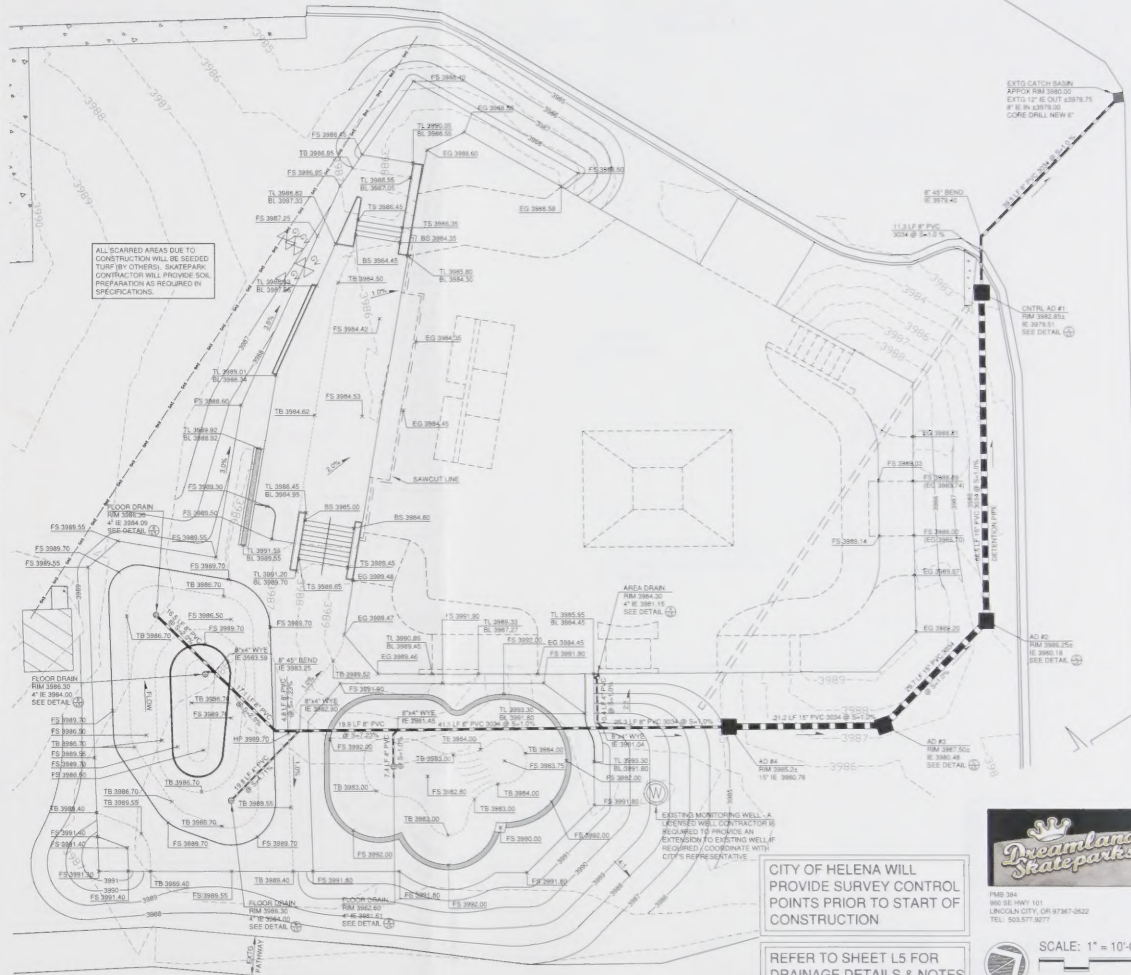
L4

GRADING LEGEND

SYMBOL	DESCRIPTION
FS 1089.35	PROPOSED ELEVATION
EXISTING CONTOURS	EXISTING CONTOURS
PROPOSED CONTOURS	PROPOSED CONTOURS
FS	FINISH SURFACE ELEVATION
TB	TOE OF BANK
BS	BOTTOM OF STEP
TS	TOP OF STEP
BL	BOTTOM OF LEDEGE
TL	TOP OF LEDEGE
RM	RM ELEVATION
IE	INVERT ELEVATION
HP	HIGH POINT
BM	BENCH MARK - AS NOTED
STORM DRAIN LINE - SIZE & TYPE AS NOTED	
4" FLOOR DRAIN - SEE DETAIL 31.5	
4" ROUND NOS AREA DRAIN - SEE DETAIL 14.3 & 6.5.5	
SLOPE DIRECTION	
BARICUT LINE	
PROPOSED AREA DRAIN - REFER TO DETAIL 6.5	

GRADING NOTES

1. THIS PLAN PROVIDES GENERAL GRADING INFORMATION. ALL SURVEYING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. EXPORTATION OF SOIL, WHICH MAY BE NECESSARY TO MEET THE GRADES SHOWN ON THIS PLAN, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE PART OF THIS CONTRACT.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF THE LOCATION OF ALL EXISTING UTILITIES IN THE FIELD. LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND FOR GENERAL INFORMATION ONLY.
4. ALL HIGH POINTS, LOW POINTS, OR GRADE BREAKS ON CONCRETE SURFACES SHALL HAVE A SMOOTH CURVE. CONCRETE SHALL NOT BE BUILT TO A POINT.
5. THE CONTRACTOR SHALL MATCH THE NEW GRADES WITHIN THE LIMITS OF WORK TO THE EXISTING GRADES.
6. CONTRACTOR SHALL PROVIDE SECURITY BARRIER DURING CONSTRUCTION & UNTIL ACCEPTED. REFER TO CITY REQUIREMENTS FOR SPECIFICS.
7. EROSION CONTROL FENCING REQUIRED TO BE IN PLACE PRIOR TO ANY SITE WORK.
8. DRAINAGE BEHIND WALLS & TRANSITION RAMPS IS AT THE DISCRETION OF THE CONTRACTOR.
9. CONTRACTOR IS RESPONSIBLE FOR PLACING TOPSOIL ACCORDING TO SPECIFICATION SECTION 650.5. SOIL PREPARATION, OTHERS WILL BE REQUIRED FOR THE SECTIONS OF ALL GRADED AREAS DUE TO CONSTRUCTION. CONTRACTOR TO COORDINATE WITH CITY REPRESENTATIVE.
10. APPROXIMATE REQUIRED TOPSOIL IS AS FOLLOWS (VERIFY):
BASE NO REQUIRED TOPSOIL IS INCHES 13 CUBIC YARDS
ALTERNATE NO 1 REQUIRED TOPSOIL IS INCHES 15 CUBIC YARDS



CITY OF HELENA WILL PROVIDE SURVEY CONTROL POINTS PRIOR TO START OF CONSTRUCTION

REFER TO SHEET L5 FOR DRAINAGE DETAILS & NOTES



PMB 304
400 W. 10th Street
HELENA, MONTANA 59601
TEL: 406.993.5077

DATE: 4/02/09
DESIGNED: S. ROPER
ENGINEER:
CHECKED:
SHEET TITLE: GRADING/DRAINAGE
SHEET NUMBER:
L4

SCALE: 1" = 10'-0"

GRADING & DRAINAGE PLAN
HELENA SKATE PARK EXPANSION
HELENA PARKS AND RECREATION
HELENA, OREGON

REGISTERED PROFESSIONAL
#1432

STEVEN C. ROPER

EXPIRES 12-31-10

DESIGN

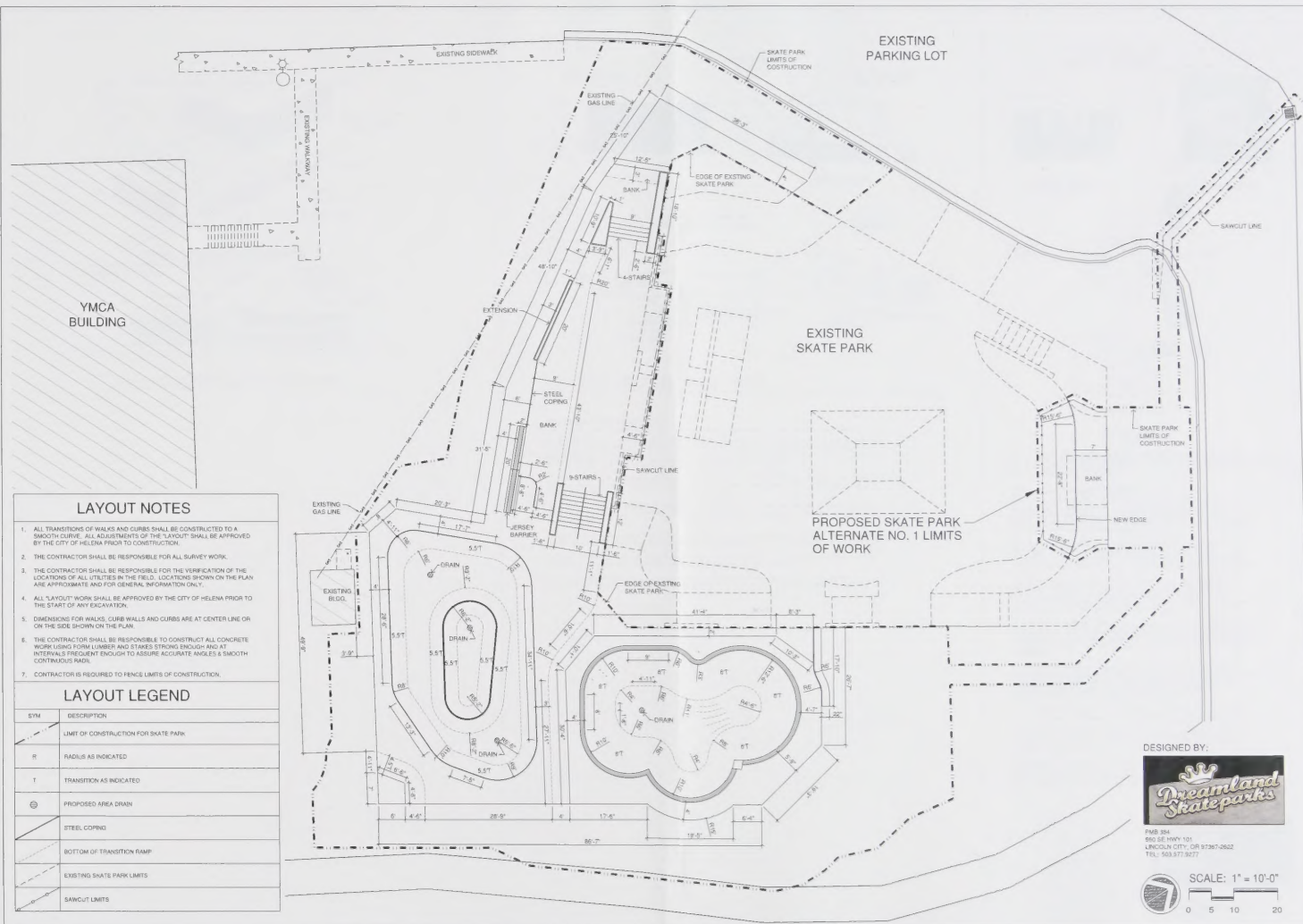
100% CONSTRUCTION SET

REV.	DESCRIPTION	DATE

PROJECT NO.	DSF001
CASE FILE NO.	
LEGAL	

DATE	4/22/08
DESIGNED BY	T. MEARS
ENGINEER	
CHECKED BY	T. MEARS

SHEET TITLE	LAYOUT PLAN
SHEET NUMBER	



LAYOUT NOTES

1. ALL TRANSITIONS OF WALKS AND CURBS SHALL BE CONSTRUCTED TO A SMOOTH CURVE. ALL ADJUSTMENTS OF THE LAYOUT SHALL BE APPROVED BY THE CITY OF HELENA PRIOR TO CONSTRUCTION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SURVEY WORK.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE VERIFICATION OF THE LOCATIONS OF ALL UTILITIES IN THE FIELD. LOCATIONS SHOWN ON THE PLAN ARE APPROXIMATE AND FOR GENERAL INFORMATION ONLY.
4. ALL LAYOUT WORK SHALL BE APPROVED BY THE CITY OF HELENA PRIOR TO THE START OF ANY EXCAVATION.
5. DIMENSIONS FOR WALKS, CURB WALLS AND CURBS ARE AT CENTER LINE OR ON THE SIDE SHOWN ON THE PLAN.
6. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONSTRUCT ALL CONCRETE WORK USING FORM LUMBER AND STAKES STRONG ENOUGH AND AT INTERVALS FREQUENT ENOUGH TO ASSURE ACCURATE ANGLES & SMOOTH CONTINUOUS FINISH.
7. CONTRACTOR IS REQUIRED TO FENCE LIMITS OF CONSTRUCTION.

LAYOUT LEGEND

SYM	DESCRIPTION
---	LIMIT OF CONSTRUCTION FOR SKATE PARK
R	RADIUS AS INDICATED
T	TRANSITION AS INDICATED
⊙	PROPOSED AREA DRAIN
---	STEEL CORING
---	BOTTOM OF TRANSITION RAMP
---	EXISTING SKATE PARK LIMITS
---	SAWCUT LIMITS

DESIGNED BY:



PHB 304
660 SE HWY 101
LINCOLN CITY, OR 97357-2622
TEL: 503.377.3027



SCALE: 1" = 10'-0"



REV.	DESCRIPTION	DATE

PROJECT NO.	DATE
DSP001	4/22/20
DATE FILED	DESIGNED BY
LOCAL	T. MEARS
	CHECKED BY
	F. MEARS

DATE	4/22/20
DESIGNED BY	T. MEARS
CHECKED BY	F. MEARS
SHEET TITLE	LAYOUT PLAN
SHEET NUMBER	L3
100% CONSTRUCTION SET	

DESIGNED BY:



PHS 344
980 SE HWY 101
LINCOLN CITY, OR 97367-2622
TEL: 503.577.9277



SCALE: 1" = 10'-0"

0 5 10 20

EXISTING
PARKING LOT

SKATE PARK
LIMITS OF
CONSTRUCTION

EXISTING
GAS LINE

EXISTING SIDEWALK

EXISTING SIDEWALK

YMCA
BUILDING

EXISTING
SKATE PARK

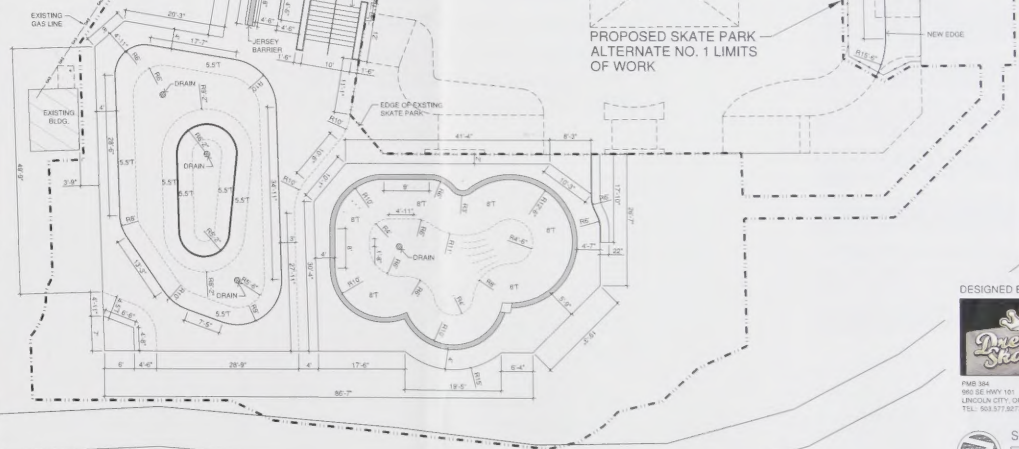
PROPOSED SKATE PARK
ALTERNATE NO. 1 LIMITS
OF WORK

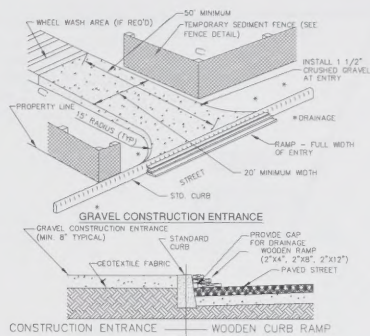
LAYOUT NOTES

1. ALL TRANSITIONS OF WALKS AND CURBS SHALL BE CONSTRUCTED TO A SMOOTH CURVE. ALL ADJUSTMENTS OF THE "LAYOUT" SHALL BE APPROVED BY THE CITY OF HELENA PRIOR TO CONSTRUCTION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SURVEY WORK.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE VERIFICATION OF THE LOCATIONS OF ALL UTILITIES IN THE FIELD. LOCATIONS SHOWN ON THE PLAN ARE APPROXIMATE AND FOR GENERAL INFORMATION ONLY.
4. ALL "LAYOUT" WORK SHALL BE APPROVED BY THE CITY OF HELENA PRIOR TO THE START OF ANY EXCAVATION.
5. DIMENSIONS FOR WALKS, CURB WALLS AND CURVES ARE AT CENTER LINE OR ON THE SIDE SHOWN ON THE PLAN.
6. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONSTRUCT ALL CONCRETE WORK USING FORM LUMBER AND STAKES STRONG ENOUGH AND AT INTERVALS FREQUENT ENOUGH TO ASSURE ACCURATE ANGLES & SMOOTH CONTINUOUS BACK.
7. CONTRACTOR IS REQUIRED TO FENCE LIMITS OF CONSTRUCTION.

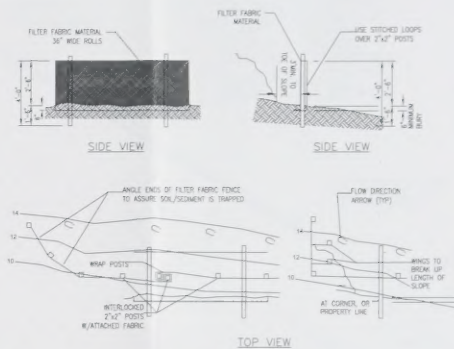
LAYOUT LEGEND

SYM	DESCRIPTION
	LIMIT OF CONSTRUCTION FOR SKATE PARK
R	RADIUS AS INDICATED
T	TRANSITION AS INDICATED
	PROPOSED AREA DRAIN
	STEEL CORING
	BOTTOM OF TRANSITION RAMP
	EXISTING SKATE PARK LIMITS
	SAWCUT LIMITS





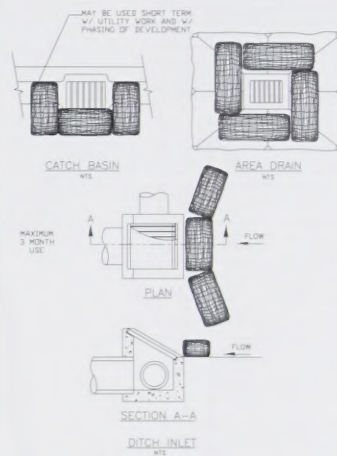
1
L2 GRAVEL CONSTRUCTION ENTRANCE N.T.S.



2
L2 TEMPORARY SEDIMENT FENCE N.T.S.

SEDIMENT FENCE NOTES:

- The filter fabric shall be purchased in a continuous roll cut to the length of the barrier to avoid joints. When joints are necessary, filter cloth shall be spliced together only at a support post, with a minimum 6-inch overlap, and both ends securely fastened to the post, or overlap 2 inch x 2 inch posts and attach as shown on detail sheet 2-LB.
- The filter fabric fence shall be installed to follow the contours where possible. The fence posts shall be spaced a maximum of 6 feet apart and driven securely into the ground a minimum of 24 inches.
- The filter fabric shall have a minimum vertical burial of 6 inches. All excavated material from filter fabric fence installation, shall be backfilled and compacted, along the entire disturbed area.
- Standard or heavy duty filter fabric fence shall have manufactured stitched loops for 2 inch x 2 inch post installation. Stitched loops shall be installed on the up hill side of the slope area.
- Filter fabric fences shall be removed when they have served their useful purpose, but not before the erosion control area has been permanently protected and stabilized.
- Filter fabric fences shall be inspected by contractor immediately after each rainfall and at least daily during prolonged rainfall. Any required repairs shall be made immediately.



3
L2 BIO-FILTER BAGS FOR TEMPORARY INLET PROTECTION N.T.S.

EROSION CONTROL NOTES:

- Approval of this erosion, sediment and pollution control plan (ESPCP) does not constitute an approval of permanent road or drainage design (e.g., size and location of roads, pipes, restrictors, channels, retention facilities, utilities, etc.).
- The implementation of this ESPCP and the construction, maintenance, replacement, and upgrading of these ESPCP facilities is the responsibility of the contractor until all construction is completed and approved and vegetation/landscaping is established.
- The boundaries of the clearing limits shown on this plan shall be clearly flagged in the field prior to construction. During the construction period, no disturbance beyond the flagged clearing limits shall be permitted. The flagging shall be maintained by the contractor for the duration of construction.
- The ESPCP facilities shown on this plan must be constructed in conjunction with all clearing and grading activities, and in such a manner as to ensure that sediment and sediment laden water do not enter the drainage system, roadways, or violate applicable water standards.
- The ESPCP facilities shown on this plan are the minimum requirements for anticipated site conditions. During the construction period, these ESPCP facilities shall be upgraded as needed for unexpected storm events and to ensure that sediment and sediment-laden water do not leave the site.
- The ESPCP facilities shall be inspected daily by the contractor and maintained as necessary to ensure their continued functioning.
- The ESPCP facilities on inactive sites shall be inspected and maintained a minimum of once a month or within the 24 hours following a storm event.
- Stabilized construction entrances shall be installed at the beginning of construction and maintained for the duration of the project. Additional measures may be required to insure that all paved areas are kept clean for the duration of the project.



PLB 004
860 SE HWY 10
LINCOLN CITY, OR 97367-2822
TEL: 503.577.9277



8166 SW Fall River Rd.
Suite 222
Bend, OR 97701-4810
Tel: (503) 466-8511
www.srdesign.com

PLANS / ENGINEERING / SURVEYING / LANDSCAPE ARCHITECTURE

LICENSED
249

TROY A. MEARS
STATE OF MONTANA

LANDSCAPE ARCHITECT

EROSION CONTROL DETAILS & NOTES
HELENA SKATE PARK EXPANSION
HELENA PARKS AND RECREATION
HELENA, MONTANA

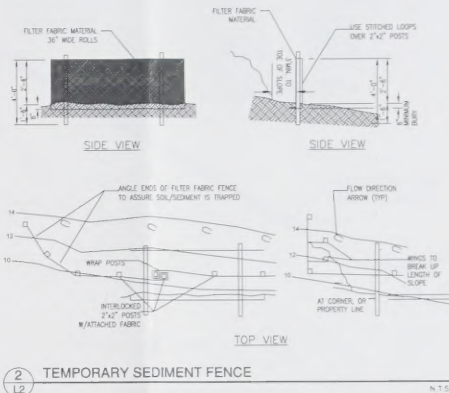
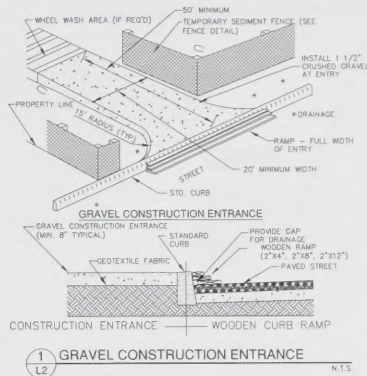
REV.	DESCRIPTION	DATE

PROJECT NO.
DSP001
DATE FILED
LEGAL

DATE
4/22/09
DESIGNED BY
T. MEARS
ENGINEER
CHECKED
SHEET TITLE
DETAIL SHEET
SHEET NUMBER

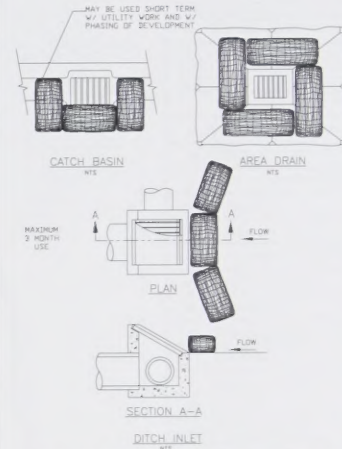
L2

100% CONSTRUCTION SET



SEDIMENT FENCE NOTES:

1. The filter fabric shall be purchased in a continuous roll cut to the length of the barrier to avoid use of joints. When joints are necessary, filter cloth shall be spliced together only at a support post, with a minimum 6-inch overlap, and both ends securely fastened to the post, or overlap 2 inch x 2 inch posts and also as shown on detail sheet 2-18.
2. The filter fabric fence shall be installed to follow the contours where feasible. The fence posts shall be spaced a maximum of 6 feet apart and driven securely into the ground a minimum of 24 inches.
3. The filter fabric shall have a minimum vertical burial of 6 inches. All excavated material from filter fabric fence installation, shall be backfilled and compacted, along the entire disturbed area.
4. Standard or heavy duty filter fabric fence shall have manufactured stitched loops for 2 inch x 2 inch post installation. Stitched loops shall be installed on the up-hill side of the sloped area.
5. Filter fabric fences shall be removed when they have served their useful purpose, but not before the upslope area has been permanently protected and stabilized.
6. Filter fabric fences shall be inspected by contractor immediately after each rainfall and at least daily during prolonged rainfall. Any required repairs shall be made immediately.



3 BIO-FILTER BAGS FOR TEMPORARY INLET PROTECTION

EROSION CONTROL NOTES:

- A. Approval of this erosion, sediment and pollution control plan (ESPPC) does not constitute an approval of permanent road or drainage design (e.g., size and location of roads, pipes, restrictors, channels, retention facilities, culverts, etc.).
- B. The implementation of this ESPPC and the construction, maintenance, replacement, and upgrading of these ESPPC facilities is the responsibility of the contractor until construction is completed and approved and vegetation/landscaping is established.
- C. The boundaries of the clearing limits shown on this plan shall be clearly flagged in the field prior to construction. During the construction period, no disturbance beyond the flagged clearing limits shall be permitted. The flagging shall be maintained by the contractor for the duration of construction.
- D. The ESPPC facilities shown on this plan must be constructed in conjunction with all clearing and grading activities, and in such a manner as to insure that sediment and sediment laden water do not enter the drainage system, roadway, or nearby applicable water storables.
- E. The ESPPC facilities shown on this plan are the minimum requirements for anticipated site conditions. During the construction period, these ESPPC facilities shall be upgraded as needed for unexpected storm events and to insure that sediment and sediment-laden water do not leave the site.
- F. The ESPPC facilities shall be inspected daily by the contractor and maintained as necessary to ensure their continued functioning.
- G. The ESPPC facilities on inactive sites shall be inspected and maintained a minimum of once a month or within the 24 hours following a storm event.
- H. Stabilized construction entrances shall be installed at the beginning of construction and maintained for the duration of the project. Additional measures may be required to insure that all paved areas are kept clean for the duration of the project.

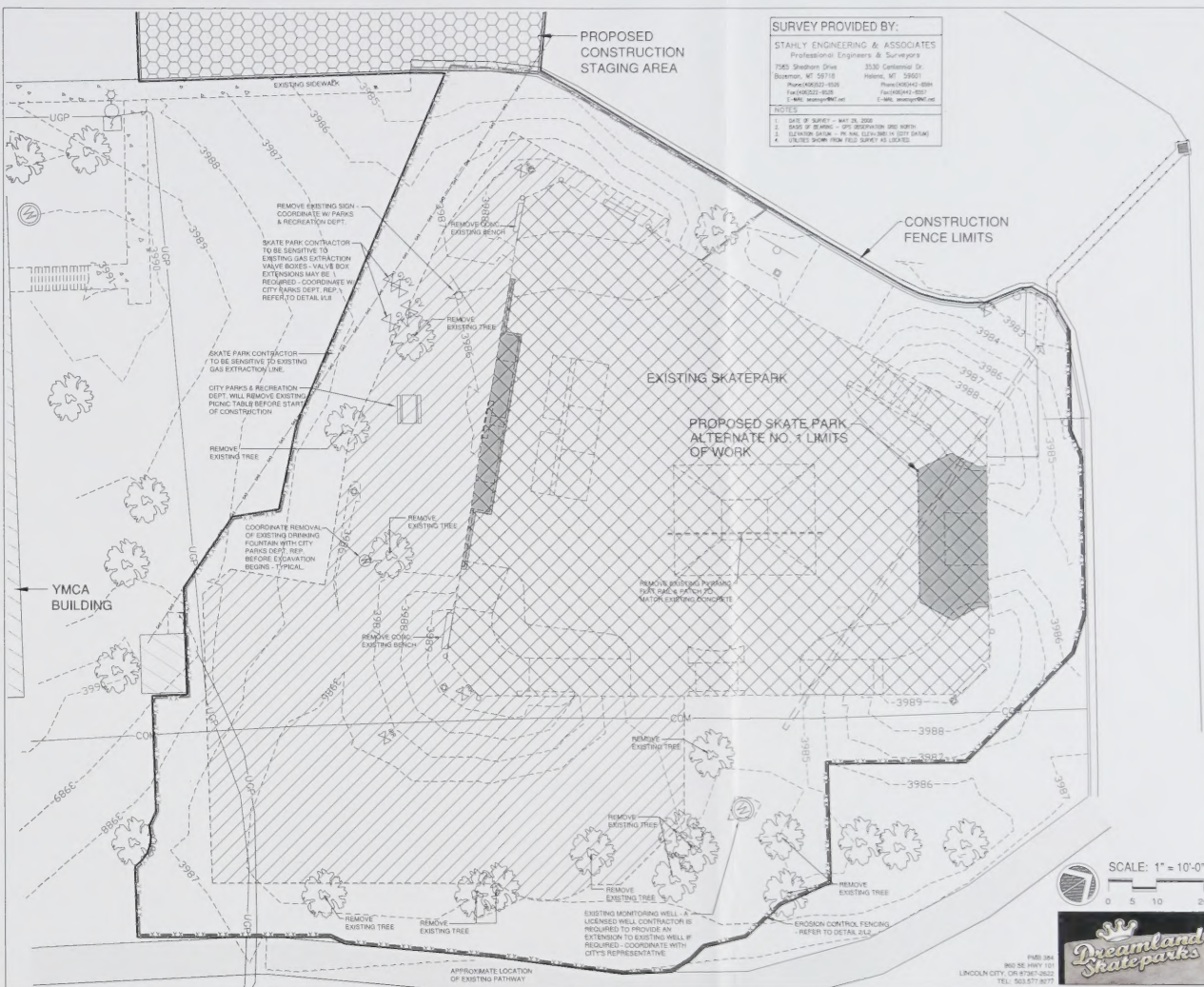


PMB 334
900 SE HWY 101
LINCOLN CITY, OR 97367-0622
TEL: 503.517.8377

DATE	DESCRIPTION

DATE OF JOB	DATE
ESPPC	4/22/09
CODE FILE NO.	
LEGAL	

DESIGNED	T. MEARS
ENGINEER	
CHECKED	
SHEET TITLE	
DETAIL SHEET	
SHEET NUMBER	



SURVEY PROVIDED BY:
STAHLY ENGINEERING & ASSOCIATES
 Professional Engineers & Surveyors
 7565 Sheldon Drive, 3530 Centennial Dr.
 Bozeman, MT 59718 Helena, MT 59601
 Phone (406) 552-4008 Phone (406) 552-4008
 Fax (406) 552-4008 Fax (406) 552-4008
 E-Mail: stahly@stahly.com E-Mail: stahly@stahly.com

NOTES:
 1. DATE OF SURVEY - MAY 01, 2008
 2. BASIS OF SURVEY - GPS OBSERVATION AND NORTH
 3. LOCATION OF SURVEY - THE CITY OF HELENA (MT)
 4. UTILITIES SHOWN FROM FIELD SURVEY AS LOCATED

LEGEND

SYM	DESCRIPTION
	EXISTING LIGHT POLE
	EXISTING CONTOUR
	EXISTING TREE
	EXISTING STORM INLET
	EXISTING ELECTRIC TRANSFORMER
	EXISTING GAS EXTRACTION SYSTEM VALVE
	EXISTING IRRIGATION CONTROL BOX
	EXISTING URINAL
	EXISTING BURIED POWER
	EXISTING BURIED COMMUNICATION WIRE
	EXISTING PVC STORM DRAIN
	EXISTING TRASH CAN
	EXISTING SPRINKLER HEAD
	EXISTING BENCH
	EXISTING DRINKING FOUNTAIN
	EXISTING WELL
	EROSION CONTROL FENCE - REFER TO DETAIL 1.0
	CONSTRUCTION FENCE LIMITS
	SAMPLE LIMITS
	CONSTRUCTION STAGING AREA
	EXISTING SKATE PARK LIMITS
	PROPOSED SKATE PARK LIMITS
	PROPOSED DEMOLITION LIMITS

GENERAL NOTES

- CONTRACTOR TO FENCE CONSTRUCTION LIMITS
- SEE SHEET L3 FOR LAYOUT INFORMATION
- TREE PROTECTION REQUIRED FOR ALL EXISTING TREES THAT ARE DETERMINED BY CITY OF HELENA REPRESENTATIVE TO REMAIN
- INSTALL EROSION CONTROL, TREE PROTECTION AND CONSTRUCTION FENCING PRIOR TO ANY SITE WORK. EROSION CONTROL FENCING MUST BE REVIEWED AND APPROVED BY CITY INSPECTOR. SEE SHEET L2 FOR ADDITIONAL EROSION CONTROL DETAILS AND NOTES
- CONTRACTOR TO BE SENSITIVE TO ALL UNDERGROUND UTILITIES EXISTING IN CONSTRUCTION AREA. CONTRACTOR TO NOTIFY CITY OF HELENA PARKS REPRESENTATIVE BEFORE START OF CONSTRUCTION
- CONTRACTOR TO NOTIFY HELENA PARKS DEPT. REP. OF ANY EXISTING IRRIGATION LINE, UNCOVERED OR DAMAGED DURING CONSTRUCTION BEFORE COVERED. SO IT CAN BE RE-PAVED OR RE-INSTALLED
- SKATE PARK CONTRACTOR TO BE SENSITIVE TO EXISTING WALKING PATH ALONG THE EASTERN PORTION OF THE SITE. VERIFY PATHWAY LOCATION BEFORE START OF CONSTRUCTION
- CONTRACTOR TO MAINTAIN CONSTRUCTION FENCING THROUGHOUT PROJECT UNTIL NOTIFIED TO REMOVE UPON COMPLETION
- ALL TREES EXISTING ON DRAWINGS TO BE REMOVED ARE REQUIRED TO BE VERIFIED BY CITY REPRESENTATIVE BEFORE REMOVAL. CITY REPRESENTATIVE WILL PROVIDE RECOMMENDATION OF TREE SIZE, SPECIES, QUANTITY AND LOCATION FOR REQUIRED TREE REPLACEMENT

8100 5th Mall Boulevard
 Helena, Montana 59601
 Phone (406) 460-1211
 Fax (406) 460-1212
 Email: srdesign@srdesign.com

LICENSED
 249
TROY A. MEARS
 LANDSCAPE ARCHITECT
 STATE OF MONTANA

EXISTING CONDITION/EROSION CONTROL DEMOLITION PLAN

HELENA SKATE PARK EXPANSION

HELENA PARKS AND RECREATION
 HELENA, MONTANA

REV.	DESCRIPTION	DATE

PROJECT NO. **DS9001**
 CASE FILE NO.
 LEGAL

DATE: **4/22/09**
 DESIGNED: **7 MEARS**
 ENGINEER:
 CHECKED:
 SHEET TITLE:
 EXISTING CONDITIONS:
 SHEET NUMBER: **L1**
 100% CONSTRUCTION SET



